

AAR/BOE Association of American Railroads/Bureau of Explosives

AAICHE American Institute of Chemical Engineers

ASME American Society of Mechanical Engineers

ASSE American Society of Safety Engineers

CDC Centers for Disease Control

CHEMTREC Chemical Transportation Emergency Center (800-424-9300)

CHLOREP Chlorine Emergency Plan

CHRIS/HACS Chemical Hazards Response Information System/Hazard Assessment

Computer System

CIS (OHMTADS) Chemical Information System (Oil and Hazardous Materials Technical

Assistance Data System)

DOC Department of Commerce

DOD Department of Defense

DOE Department of Energy

DOI Department of Interior

DOT Department of Transportation

EOC Emergency Operations Center

EPA Environmental Protection Agency

ER Emergency Response

ERT Emergency Response Team

FCO Federal Coordinating Officer

FEMA Federal Emergency Management Agency

HHS Health and Human Services, Department of



HMTC Hazardous Materials Technical Center

IDLH Immediately Dangerous to Life or Health

IEMS Integrated Emergency Management System

LEPC Local Emergency Planning Committee

NCP National Contingency Plan

NIOSH National Institute for Occupational Safety and Health

NOAA National Oceanic Atmospheric Administration

NRC National Response Center (800-424-8802)

NRC Nuclear Regulatory Commission

NRT National Response Team

NSF National Strike Force

OSC On-Scene Coordinator

OSHA Occupational Safety and Health Administration

PAAT Public Affairs Assist Team

PIAT Public Information Assist Team

PIO Public Information Officer

PSTN Pesticide Safety Team Network

RACES Radio Amateur Civil Emergency Service

RRC Regional Response Center

SSC Scientific Support Coordinator

USDA U.S. Department of Agriculture

USCG United States Coast Guard



DEFINITIONS

Accident Site The location of an unexpected occurrence, failure, or loss, either at a

plant or along a transport route, resulting in a release of hazardous

materials.

Acid A compound that yields hydrogen ions when dissolved in water and has

a range.

Acute Exposure Exposures that occur for relatively short periods of time, generally hours

to 1-2 days.

Acutely Toxic Chemicals which can cause both severe short and long term health

effects after a single, brief exposure (short duration). These chemicals can cause damage to living tissue, impairment of the central nervous system, severe illness or in extreme cases, death when ingested,

inhaled, or absorbed through the skin.

Alkali Any material that supplies hydroxide ions when it is dissolved in water

and has a range on the ph scale from 7 to 14.

Blasting Agents A material designed for blasting which has been tested and found to be

so insensitive that there is very little probability of accidental initiation to

explosion or of transition from deflagration to detonation.

BLEVE Boiling Liquid Expanding Vapor Explosion

Boiling Point The temperature at which a liquids rate of evaporation exceeds its rate

of concentration.

By-Product Chemicals Material produced or generated in an industrial process in addition to

the principle product.

Chemical Process A particular method of manufacturing or making a chemical, usually

involving a number of steps or operations.

CHEMTREC The Chemical Emergency Transportation Center (CHEMTREC) is a

centralized toll free telephone service (800-424-9300) which has been set up to provide immediate advice on the nature of the product and steps to be taken in handling the early stages of transportation

emergencies where hazardous chemicals are involved.

CHLOREP The Chlorine Emergency Plan (CHLOREP) was established by the

Chlorine Institute to enable the nearest producer of chlorine products to



respond to an accident involving chlorine. CHEMTREC serves as the

communications link for this program.

Combustible Liquid Any liquid having a flash point above 100 degrees F.

Combustion Product Material produced or generated during the burning or oxidation of a

material.

Command Post Facility at a safe distance upwind from an accident site, where the on-

scene coordinator, responders and technical representatives can make response decisions, deploy manpower and equipment, maintain liaison

with media, and handle communications.

Contingency Plan A document developed to identify and catalog all the elements required

to respond to an emergency, to define responsibilities and specific

tasks, and to serve as a response guide.

Corrosive Material Any liquid or solid that causes visible destruction of human skin tissue

or a liquid that has a severe corrosion rate on steel.

Cryogen A gas which must be cooled to a very low temperature to maintain it in

a liquid state. Examples: nitrogen, oxygen, hydrogen.

Decomposition Product Material produced or generated by the physical or chemical degradation

of a parent material.

Deflagrate To burn rapidly with intense heat.

Detonate The extremely rapid, self-propagating decomposition of an explosive

accompanied by a high-pressure temperature wave that moves faster

that the speed of sound.

Disposal The removal of waste material to a site or facility specifically designed

and permitted to receive such wastes.

Emergency A situation created by an accidental release or spill of hazardous

chemicals which poses a threat to the safety of workers, residents, the

environment, or property.

Etiologic Agency A viable micro-organism, or its toxin, which causes or may cause

human disease.

Evacuation Removal of residents from an area of danger.

Exclusion Zone The area where contamination does or could occur.



Explosive Any chemical compound	d, mixture, or device the primary or co	ommon
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purpose of which is to function by explosion, i.e., with substantially

instantaneous release of gas and heat.

Division 1.1 Explosives with a mass explosion hazard.

Division 1.2 Explosives with a projection hazard.

Division 1.3 Explosives with predominantly a fire hazard.

Division 1.4 Explosives with no significant blast hazard.

Division 1.5 Very insensitive explosives with a mass explosion hazard.

Division 1.6 Extremely insensitive articles.

Fire Point The temperature at which a liquid fuel will produce vapors sufficient to

support combustion once ignited. The fire point is usually a few

degrees above the flash point.

Fixed Facility A plant site where handling/transfer, processing, and/or storage of

chemicals are performed.

Flammable Gas Any compressed gas meeting the requirements for lower flammability

limit range, flame projection, or flame propagation criteria.

Flammable Liquid Any liquid having a flash point below 100 degrees F.

Flammable or The percentage of a substance in air that will burn once it is ignited. **Explosive Limits**

Most substances have an upper (too rich) and a lower (too lean)

flammable limit.

Flammable Solid Any solid material, other than explosive, is liable to cause fires through

> friction, retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently

as to create a serious transportation hazard.

Flash Point The minimum temperature at which a liquid fuel gives off sufficient

> vapors to form an ignitable mixture with the air near the surface. At this temperature, the ignited vapors will flash, but will not continue to burn.

Freezing Point The temperature at which a substance changes from a liquid to a solid.



Hazard Analysis In this context, use of a simplified vapor dispersion model which looks

at the movement of toxic or explosive vapors over distance at a concentration level of concern to determine whether the amount of chemical at a facility or in a transport container poses a threat to the surrounding community, requiring more detailed analysis and planning.

Hazardous Chemicals which are explosive, materials which are flammable,

poisonous, corrosive, reactive, or radioactive and require special care in handling because of the hazards they pose to public health and the

environment.

Irritating Material A liquid or solid substance which upon contact with fire exposed to air

gives off dangerous or intensely irritating fumes.

LD 50 Lethal Dose, 50% kill - amount of material which when administered to

laboratory animals kills half of them.

Misc. Haz Mat Products, substances or organisms.

NCP The National Contingency Plan establishes the structure by which the

Federal government responds to episodic air toxic release events.

Non-Flammable Gas Any compressed gas other than a flammable compressed gas.

Off-Scene Support Assistance (via telephone, radio, or computer) from technical persons,

agencies, shippers, responders, etc., not at the accident site.

Offsite The area outside the boundary of the on-site area that may be affected

by the consequences of an extraordinary situation.

On-Scene Coordinator The official in charge of a federally financed response action.

Onsite The area within the boundary established by the owner of a fixed

facility.

Organic Peroxide An organic compound containing the bivalent -0-0 structure and which

may be considered a derivative of hydrogen peroxide where one or more of the hydrogen atoms have been replaced by organic radicals

must be classed as organic peroxide.

Oxidizer A substance such as chlorate, permanganate, inorganic peroxide, or a

nitrate, that yields oxygen readily to stimulate the combustion or organic

matter.



PH Common scale used in expressing both acidity and alkalinity of a

product whose values range from 0 to 14, with 7 being neutral.

Plume A vapor cloud formation which has shape and buoyancy.

PPM Parts per million.

Pyroforic Liquid Any liquid that ignites spontaneously in dry or moist air at or below 130

degrees F.

Radioactive Material Any material, or combination of materials, that spontaneously emits

ionizing radiation having a specific gravity greater than 0.002 micro

curies per gram.

Response The efforts to minimize the hazards created by an emergency by

protecting the people, environment, and property and returning the

scene to normal pre-emergency conditions.

Risk The probability that damage to life, property, and/or the environment will

occur if a hazard manifests itself.

Simulation A mock accident or release set up to test emergency response

methods or for use as a training tool.

Site/Facility Any location where acutely toxic chemicals are manufactured,

processed, stored, handled, used, or disposed; in short, any place where these chemicals are frequently found at places other than

industrial sites.

Special Populations Concentrations of people in one area or building for a special purpose

or in certain circumstances (i.e., schools, hospitals, nursing homes,

orphanages, shopping centers).

Specific Gravity The ratio of the density of a liquid substance to the density of a

reference substance. The reference substance is usually water and is

considered to have a specific gravity of one.

Storage Methods of keeping raw materials, finished goods, or products while

awaiting use, shipment, or consumption.

Tanker Term commonly used to describe a liquid cargo tank which is being

carried by a truck on the highway system.

TLV Threshold Limit Value - upper limit of a toxicant concentration to which

an average healthy person may be repeatedly exposed on an all day,

every day basis.



Toxic Substances & Infectious Substances

Division 6.1 Toxic Substances - Poisonous gases or liquids of such nature that a

very small amount of the gas, or vapor of the liquid, mixed with air is

dangerous to life.

Division 6.2 Infectious Substance - Substances, liquids, or solids, (including pastes

and semi-solids) other than Class A or irritating materials, which are known to be so toxic to man as to afford a hazard to health during transportation; or which, in the absence of adequate data on human

toxicity, are presumed to be toxic to man.

Toxin Any substance, which upon contact with a living organism, can cause

injury or interference with the life processes of that organism, without

acting mechanically.

Transfer Loading and unloading of chemicals between transport vehicles and

storage vessels, and sending chemicals via pipes between storage

vessels and process reactors.

Transport To carry or convey goods from one place to another using ships, trucks,

trains, pipelines, or airplanes.

Transport Mode Methods of transportation: Highway (trucks); rail (trains); water

(ship/barge); pipelines; air (plane).

Vapor Density The ratio of the density of a vapor substance to the density of a

reference substance. The reference substance is usually air and is

considered to have a vapor density of one.

Vapor Dispersion The movement of vapor clouds in air due to wind, gravity spreading,

and mixing.

Water Reactive Material Means any solid substance (including sludges and pastes) which, by

interaction with water, is likely to become spontaneously flammable or

to give off flammable or toxic gases in dangerous quantities.